having been excavated from Vedda caves. Dr. Seligmann has made collections of these, but in one cave which he excavated, out of some three hundred pieces of quartz about four per cent. presented definite appearances of having been worked. That particular cave had Sinhalese carving and stone masonry in and around it. Indeed, he has evidence that the Sinhalese were associated with so-called Vedda caves about the beginning of the Christian era. It seems that even among the "wild Veddas" there has been a much older and more intimate cultural connection with the Sinhalese than the literature of the subject would lead one to suspect.

Dr. Seligmann took a large number of photographs, many of which are very successful, but unfortunately the photographs of the dances of the least sophisticated community are not so satisfactory, as these Veddas would dance only in their usual dancing places, which are deep in the forest, where instantaneous work was practically impossible. A number of plates of the new colour process were taken out, but the results were not very satisfactory. A very complete series of phonograph records of songs were obtained, from lullabies to invocations to the dead. The great achievement of securing the songs of the women was due to the presence and cooperation of Mrs. Seligmann. An unexpected experience in working with the phonograph was its enormous popularity, not simply amazement or wonder, but sheer delight in it.

Many ethnologists have felt how desirable it is that trained women should make investigations in the field, since it was realised that information obtained by men, through men, about the practices and ideas of native women must necessarily be imperfect and biassed. The present expedition has conclusively proved the truth of this; indeed, the mere presence of a woman gave these shy and extremely jealous people such confidence that the Seligmanns were allowed to make their camps close to the Vedda caves. One of the groups of the "wildest" Veddas invited them to share the cave in which the whole community, including the girls and young unmarried women, were living; a surprising offer, as Neville, the most sympathetic of recent observers of the Veddas, records how, as a sign of extreme amity and confidence, he was once allowed to spend a few minutes in the company of the younger women of a community to whom he was well known. It is thus no exaggeration to say that had not Mrs. Seligmann accompanied her husband in this arduous expedition, the results would have been less numerous and important.

A. C. HADDON.

NOTES.

THE list of honours issued on the occasion of His Majesty's birthday includes the names of a few men distinguished for their work in pure or applied science. Baronetcies have been conferred upon Sir T. Lauder Brunton, F.R.S., and Dr. W. Watson Cheyne, C.B., F.R.S. The honour of knighthood has been conferred upon Prof. A. G. Greenhill, F.R.S., Colonel David Bruce, C.B., F.R.S., and Mr. R. A. Hadfield, president of the Iron and Steel Institute last year. Mr. W. H. Power, F.R.S., has been promoted to the rank of K.C.B., Dr. T. H. Holland, F.R.S., has been appointed a Knight Commander of the Order of the Indian Empire (K.C.I.E.), Dr. A. G. Bourne, F.R.S., a Companion of the same Order (C.I.E.), and Dr. W. F. King, chief astronomer, Department of the Interior, Canada, a Companion of the Order of St. Michael and St. George (C.M.G.). Dr. Henry Jackson, regius professor of Greek, Cambridge, is appointed to the Order of Merit, which was designed "to include British subjects who have won conspicuous distinction in the naval and military services, or in letters, art, and science." Perhaps Prof. Jackson's claims to this honour may be understood at Cambridge.

SOME reference has been made in the daily papers to the ratio of honours awarded to naval and military men, the suggestion being that the Army receives an undue share of these distinctions. With the demands of the two services for recognition we are not concerned, but the question induces us to ask what ratio exists between the award of honours to men who devote their lives to work which promotes the scientific progress of the country and those who do not? As to the relative value to the nation of scientific and party-political work there can be no two opinions; and statesmen themselves, especially when out of office, are ever ready to acknowledge the important part which scientific knowledge plays in national greatness and development. Judging from their utterances, science should be cherished above all things by the nation which desires to secure advancement; but while it is thus honoured in the abstract, it gives place to party politics when rewards for national service are being distributed. Probably the reason is that the ministers and officials who are chiefly concerned with the affairs of State and Court live in a world in which science and the results of science are almost unknown. This is really the characteristic of the official mind in England. For instance, the Court newsman in his official report of the King's garden-party states that invitations were issued to "representatives of the musical, dramatic, and literary professions." It is a striking illustration of the state of the official mind that representatives of the musical and dramatic professions should be referred to as having been invited to meet their Majesties, while science was not mentioned.

As we went to press yesterday, July 1, the Linnean Society celebrated the fiftieth anniversary of the reading of the joint paper on natural selection by Charles Darwin and Alfred Russel Wallace. At the afternoon meeting a medal, specially struck for the occasion, was presented to Dr. Alfred Russel Wallace, Sir Joseph Dalton Hooker, Prof. Ernst Haeckel, Prof. Eduard Strasburger, Prof. August Weismann, Dr. Francis Galton, and Sir E. Ray Lankester. At the same meeting congratulatory addresses were received from British universities and British and foreign societies and academies. About a hundred of the fellows and guests of the society dined together at the Princes' Restaurant at 6.30, and later in the evening a reception was held at the rooms of the society. We hope to give a full account of the proceedings in our next issue.

M. HENRI BECQUEREL has been elected permanent secretary of the Paris Academy of Sciences for the physical sciences.

PROF. H. H. TURNER, F.R.S., has been elected correspondant of the Paris Academy of Sciences in the section of astronomy in succession to the late Prof. Vogel.

THE death is announced, at Paris, of Dr. Luiz Cruls, director of the Observatory of Rio de Janeiro.

THE annual exhibition of antiquities, from excavations in Upper Egypt during the past season, was opened at the Institute of Archæology, University of Liverpool, on Monday, June 29, and will remain open until Thursday, July 9

The Physico-medical Society of Vienna has made the following appointments in connection with the celebration of the centenary of the foundation of the society:—*Honorary Ph.D.*, Sir Victor Horsley, F.R.S.; *corresponding members*, Prof. J. Loeb, Dr. C. S. Minot, Prof. E. Rutherford, F.R.S., and Prof. C. S. Sherrington, F.R.S.

The council of the Royal Society of Edinburgh has awarded the Neill prize for the triennial period 1904–7 to Mr. Frank J. Cole, lecturer on zoology, University College, Reading, for his papers entitled "A Monograph on the General Morphology of the Myxinoid Fishes, based on a Study of Myxine," published in the Transactions of the society, regard being also paid to Mr. Cole's other valuable contributions to the anatomy and morphology of fishes.

On July 2, 3, and 4 there will be on exhibition at the Royal College of Surgeons, Lincoln's Inn Fields, W.C., a very remarkable collection of specimens illustrating the diseases, injuries, and racial peculiarities of the ancient inhabitants of Nubia. The collection was made during the archæological survey of the area which will be submerged on raising the level of the Aswan dam. The collection embraces specimens derived from cemeteries, to which Dr. G. A. Reisner has assigned dates ranging from a pre-dynastic to an early Christian period. The collection has been described and arranged under the direction of Prof. Elliot Smith, F.R.S., and Dr. Wood Jones. A report of the first results of the archæological survey of Nubia was recently published (Bulletin No. 1, Cairo, 1908), with an introduction by Captain H. G. Lyons, F.R.S.

The fifth congress of the International Association for Testing Materials is to be held at the beginning of September, 1909, in Copenhagen, when numerous questions in connection with the testing of metals, hydraulic cements, and miscellaneous materials will be considered, and many other important technical problems will be discussed. To maintain closer contact with the members of the association in the intervals between the congresses, the council has decided to publish from time to time Proceedings of the association. Two numbers have appeared already, and the new periodical will certainly keep members informed of what is being done in the subject in which they are interested. Copies of the Proceedings may be obtained in this country from Messrs. E. and F. Spon. The price of each issue is, to non-members, sixpence.

To mark the completion of the fiftieth year of the existence of the Geologists' Association in November next, it is proposed to issue a volume dealing with the geology of the districts of England and Wales visited by the association since its foundation. The volume will consist of a series of articles by competent authorities on the various localities visited, who will deal with the geology of their district from the point of view of present-day knowledge. The book will be edited by Messrs. H. W. Monckton and R. S. Herries, be illustrated with maps and sections, and probably be ready for publication before the end of the year. We notice that the next long excursion of the association is to be to the Berwyns, from July 31 to August 7, under the directorship of Mr. J. Lomas. The headquarters of the party will be at the Wynnstay Hotel, Oswestry, and persons wishing to take part in the excursion are requested to write to Mr. H. Kidner, excursion secretary, 78 Gladstone Road, Watford.

We learn from *Science* that an expedition, under the combined auspices of the American Museum of Natural History and the Geological Survey of Canada, is now on its way to the mouth of the Mackenzie River and adjacent country to collect ethnological and zoological material. The party is being conducted by Mr. V. Stefánsson, who is well acquainted with the Eskimos of the region, having wintered with them in 1906, and Mr. R. M. Anderson, a well-known naturalist. The expedition was organised for the purpose of making scientific studies of the Eskimos of the country, of procuring collections illustrating, not only the material cultures of the uncivilised tribes of the region, but also of the zoological conditions which prevail there, and of increasing our knowledge of the geology of the region. The expedition will commence its return journey during the summer of 1909.

The annual general meeting of the Royal Society of Arts was held on June 24, Sir Steuart Colvin Bayley, K.C.S.I., chairman of council, in the chair. The business of the meeting was the reading the report of the council on the work of the society during the past session, the 154th since the formation of the society in 1754. In referring to the award of the Albert medal to Sir James Dewar for his low-temperature investigations, special stress was laid on the power placed at the disposal of those interested in industrial applications of science by the provision of temperatures so far below any hitherto available, and it was suggested that before long this new power would find numerous practical applications. Amongst the lectures delivered under the various trusts available for such purposes, the course of lectures on industrial hygiene, provided out of funds left some years ago to the society by Mr. Benjamin Shaw, was one of the most important. The award of a medal, under the same trust, to Prof. W. Galloway, for his researches into the action of coal dust in colliery explosions, was also recorded.

The third international congress on the history of religions will be held at Oxford from September 15–18 next. Prof. E. B. Tylor, F.R.S., is the honorary president, Sir A. C. Lyall the president, and Prof. Percy Gardner the chairman of the local committee. The business of the congress will be conducted in nine sections, and there will be general meetings for papers and lectures of wide importance, as well as meetings of sections. In addition to the addresses by the president and by the presidents of sections, numerous important papers will be read. Among these may be mentioned that of Dr. A. J. Evans, on Cretan religions; M. E. Fourrière, on "le culte du soleil et les sacrifices humains chez les Grecs"; Miss Mary A. Owen, on the Messiah beliefs of the American Indians; Prof. A. H. Sayce, on the influence of Babylonian religion upon Asia Minor and Syria; Mr. W. W. Skeat, concerning Malay religion; and Dr. E. Wallis Budge, on some central African elements in the dynastic religion of Egypt. English, French, German, and Italian will be recognised as official languages. Representatives have been appointed already from many British and foreign universities and learned societies. Offers of papers should be sent to the honorary secretaries, Dr. J. Estlin Carpenter, 109 Banbury Road, Oxford, and Dr. L. R. Farnell, 191 Woodstock Road, Oxford.

The report of the Rugby School Natural History Society for 1907 appears in an abbreviated form owing to the omission of the reports of the papers read, which are issued in a local journal. Steps have been taken during the year to bring the observing station up to the requirements of the Meteorological Office, and it is hoped that when the next report appears the station will have been reaccorded official recognition.

THE contents of the May number of the *Victorian Naturalist* include several papers on the local bird-fauna, one of these being illustrated with an excellent reproduction of a photograph of a black-winged gannet colony. In the course of the same paper it is mentioned that the eggs of the short-tailed petrel, or "mutton-bird" (*Puffinus tenuirostris*), are extensively used as an article of diet by the islanders in Bass Strait, and are of excellent flavour.

THE second fasciculus of vol. xxxvii. of *Travaux de la Soc. Imp. des Naturalistes de St. Pétersbourg* is devoted to the (mainly invertebrate) fauna of Turkestan, sections of which are described by specialists. An amphipod from the Issik Kul is made the type of a genus under the somewhat barbarous title of Issykogamarus. Of more general interest is an illustrated account, by Mr. V. A. Faussek, on the minatory attitude assumed by the Russian tarantula (*Trochosa singoriensis*), forming part of a paper on threatening postures in animals generally. The spider in question, which has a dark-coloured body with limbs marked by bold bands of black and yellow, is represented in a coloured plate both in its normal posture and in the threatening attitude, when the body is raised nearly vertically with the limbs extended in a radiating manner.

FOUR out of the five articles forming the combined first and second parts of vol. xxxviii. of the *Morphologisches Jahrbuch* are devoted to the anatomy of mammals, and of these four three relate to the hind-limb. The longest, and perhaps most important, is a paper by Mr. E. Loth, of Warsaw, on the morphology of the plantar aponeurosis in the Primates, in the course of which it is shown that the different types displayed by this structure accord well in the matter of their inter-relationships with the generally accepted classification of the order. In the second paper Mr. E. Glaesmer discusses the flexor muscles of the lower part of the leg and foot, while in the third Mr. G. P. Frets records the variations observable in the peroneal muscles. The sulci in the brain of the cat, and their individual variation, form the subject of the fourth paper, by Mr. E. Landau, of Dorpat, a large number of examples of the brain being figured.

AMONG several papers published in various Argentine journals, of which we have received separate copies from the author, Prof. Angel Gallardo, special attention may be directed to one published in vol. xvi. of the *Anales* of the National Museum of Buenos Aires on a remarkable case of mimicry in a caterpillar. The caterpillar, which is rather more than 4 inches in length, is the larva of *Dilophonota lassauxi*, and feeds on *Araujia sericifera*, to the stem and leaves of which it presents a most striking resemblance, both as regards form and colouring, as is shown by a coloured illustration. Pale blue in colour, with three longitudinal stripes of fawn, this caterpillar has two of the anterior segments of the thorax transversely enlarged in such a manner that they closely simulate the nodes of the food-plant. The most remarkable feature in the resemblance is, however, the development of a pair of white knobs on the second of these enlarged rings exactly matching the white knobs on the nodes of the plant, which mark the points of attachment of fallen leaves. The mimicry is one of the most remarkable that has ever come under our notice.

AN important contribution to embryology is made by Mr. B. M. Davis in his account of the early life-history of *Dolichoglossus pusillus* (a relative of Balanoglossus, and therefore a representative of the Enteropneusta), issued as vol. iv., No. 3, of the Zoological Publications of California University. The creature, which is of a brilliant orange colour, burrows in the mud on various parts of the Californian coasts, and deposits its eggs on one side of the burrow, as is shown in a coloured plate accompanying the memoir. Its breeding-places at San Pedro were recently destroyed, but the author of the paper was fortunate enough to obtain specimens of the eggs at San Diego Bay. The acquisition of these was of the greatest importance, since the only accounts—by Dr. W. Bateson—of the development of the Enteropneusta previously published are incomplete so far as the early stages are concerned. It will be remembered that certain points of resemblance between Balanoglossus and the lancelet were indicated by Dr. Bateson, and from these resemblances it has been argued that the body-cavities of these two organisms have a similar origin. Certain difficulties have, however, been expressed with regard to the acceptance of this view, and the author of the present paper points out that, if his own interpretations be correct, these difficulties are now converted into impossibilities.

ACCORDING to a note in the Journal of the Royal Society of Arts, the people of Baltimore seem to have been successful in their warfare with the mosquito. In December, 1906, an ordinance was passed by the City Council, and the sum of 2000*l.* appropriated by it, for the purpose of taking measures to exterminate the insect. The first step taken was a distribution by the police to householders of a notice setting forth the provisions of the law requiring all the cisterns, tanks, and wells to be covered with wire gauze; all pools, ponds, fountains, or other water receptacles not containing fish to be screened or covered with crude petroleum; forbidding any water to remain in any receptacle whatsoever; requiring all privy walls to be covered thoroughly with kerosene every fifteen days; and that water be turned off, and water receptacles emptied, should a house be unoccupied for more than five days. Dr. C. M. Hill, who had charge of the work, brought the matter forcibly before the public by delivering lectures explaining the mode of mosquito extermination, and cards were displayed in the tramcars directing the attention of householders to the importance of their cooperation in the work. Reporting upon the experiment, Mr. Consul Fraser says the result of it is satisfactory, and the City Council has appropriated another 1000*l.* for continuance of the work in 1908. The mosquito has hitherto been the cause of much illness and death in Baltimore.

INFORMATION regarding another new rubber plant is collated by Dr. O. Stapf in the *Kew Bulletin* (No. 5). The plant, discovered in Portuguese West Africa, receives the name of *Raphionacme utilis*—Raphionacme being a genus of the order Asclepiadaceæ—and is known in the country of origin as "ecanda" or "marianga." It is peculiar in producing a short herbaceous stem, while the latex is obtained from the tuberous root, that may attain a diameter of 5 inches. There is at present no prospect of extracting the rubber with profit.

ALTHOUGH there has been a notable introduction of new species of Primula within recent years from western China, an additional list, remarkable not only for the number of species, but also for the striking characters of certain of the plants, is chronicled by Mr. Forrest in the Notes from the Royal Botanic Gardens, Edinburgh (April). The species of Primulaceæ there described were collected in western Yunnan and eastern Tibet; they include fifteen new species of the genus, also a few species of Androsace and

Lysimachia. The species Littoniana, falling in the section Capitatæ, produces a deep spike of crowded flowers, in which the red calyces of the buds form a strong contrast to the deep purple expanded flowers. *Primula Forrestii* bears numerous flowers of a deep orange colour, and, judging from the root-stocks, continues to grow for fifty years or longer. Three of the four known species of the unique section Omphalogramma—taking their name from the oval, flattened shape of the seed—are recorded. The list is distinctly one that horticulturists will do well to examine.

The heredity of hair in man forms the subject of an article by Gertrude and Charles Davenport in the May issue of the *American Naturalist.* Starting with the assumption that the straight, cylindrical (Mongolian) type of hair, as agreeing with that of mammals generally, is more primitive than the frizzly, compressed type characteristic of negroes, the authors discuss the Mendelian relations of these and the intermediate wavy and curly types. The results suggest that straight hair is recessive to the frizzly type, although the latter may in some instances fail to dominate. Further, wavy hair is usually, if not invariably, a heterozygous type, and not recessive to a higher (curly) and dominant over a lower (straight) stage. The paper concludes with a summary of the colour of the eyes and hair in the children of parents who are similar or dissimilar in these respects.

In the June number of *Man* Prof. Dubois discusses Mr. J. Gray's investigations on pigmentation by the use of his newly modified Lovibond's tintometer. He accepts the suggestion that hair contains two coloured pigments, orange and black, the black pigment increasing uniformly in amount from blonde to black, the orange pigment remaining practically constant in that hair series. In the red-hair group, on the contrary, the orange pigment is predominant, its increasing amount causing the coloration from light to dark red. Finally, red hair is derived from dark hair by the conversion of more or less of the dark pigment into an equal amount of the orange. This last group, for which he suggests the name pyrrhotism (*pyrrhos*=foxy-red), he considers to result from an easily occurring chemical modification of the melanochrome into pyrrhochrome pigments. But the observed facts are inconsistent with the view of Topinard and others, that red-hairedness may be regarded as having the character of a variety of atavistic origin.

In a short article published in Nature last March (vol. lxxvii., p. 465), attention was directed to the interesting results in reference to the chemistry of Egyptian mummies which had been elucidated by the recent work of Dr. W. A. Schmidt. His conclusions, however, do not seem to have met with universal acceptance, and Mr. F. Lucas has in particular questioned one of them (*Cairo Scientific Journal*, vol. ii., April), namely, that relating to the composition of the bath in which the ancient dead were soaked. According to Schmidt, the "natrum" bath of Herodotus consisted mainly of common salt, and not of "natrum" or crude Egyptian sodium carbonate, which is found encrusted on the bottom and sides of certain lakes in the land of the Pharaohs; if natrum was used at all, it was employed for stuffing the mummy after the pickling bath of brine. Mr. Lucas believes, on the other hand, that "natrum" was actually used in the bath, though in some cases it was applied in solid form, and that the use of common salt was not introduced until the beginning of the Christian era.

Mrs. Andrew Johnson sends us a diagram of a curious ring around the moon observed by her at Arundel on June 11, at 10 p.m., that is, three days before full moon. The ring was not a complete circle, but segment-shaped, corresponding to the phase of the moon at the time. Two mock moons seen respectively to the east and west of the moon itself, and a second halo touching the chord of the segment, were also similarly shaped. The diagram is unsuitable for reproduction, but the distortion of the halo and mock-moons represented by it is of noteworthy interest.

The results of the meteorological observations on the summit of the Sonnblick (3105 metres) for the year 1907 give the mean temperature of January as 4°·6 F., of July as 30°·2; the absolute maximum was 49°·5, in August, and the minimum −18°·2, in January. The precipitation was equivalent to 65·8 inches, in 241 days, of which 5·6 inches fell as rain between May and September. Fog was observed every month, the total number of days being 262; it was least frequent in November, eleven days. The report contains particulars of several other mountain stations, including an interesting account of the Etna Observatory (2950 metres), with a photographic illustration of the volcano as seen from Catania.

Among the various useful articles in the Journal of the Meteorological Society of Japan for January–April (abstracts of which are now given in English), we may mention:—(1) relation between climate and tobacco cultivation, by K. Asakura, and (2) climate and rice crops, by H. Ogiwara, containing interesting particulars of the influence of rainfall and temperature on different stages of the growth of these crops; (3) a summary of the temperature and rainfall observations made during the last three years at stations in south China, by M. Ishida. The tables show that the climate there is not far different from that of the western part of Japan, except that the absolute maximum temperature in south China is more extreme, reaching at times 102°. The Yang-tse-kiang has a great influence in moderating the continental climate. Particulars are given in the April number of the journal of a new system of storm signals introduced in Japan on April 1, showing, during the day time, by means of drums, cones, and balls, the position of the storm centre, its direction of motion, speed, and other details. During the night time lights are displayed, indicating only the position of the storm centre.

The Sierra Club Bulletin (January) contains an article by Mr. G. K. Gilbert on "Lake Ramparts." Special attention is directed to the lake ramparts in the sierra of southern Utah, and the influence of glacial action in their formation is discussed. The absence of ramparts in the lake basins forms the basis of the theory that some force has been exerted to move the boulders to their present positions on the shores. The nature of this moving agency is discussed, the suggestion that the work was carried out by aboriginal inhabitants of the country being dismissed as improbable. The theory which adopts ice as the moving force is supported by the fact that ramparts are found only in cold countries. Mr. Gilbert illustrates this theory by means of sections of sheet-ice, showing modes of cracking and the effects of thrust on the shores, and explains how this action may have transferred the boulders from the lake basins to the shores.

The Berlin Gesellschaft für Erdkunde has issued a bibliography of geographical literature published during the year 1904, compiled by Dr. Otto Baschin, and published under the title of "Bibliotheca Geographica" by Mr. W. H. Kühl, of Berlin. The works are arranged according to subjects included under the two main divisions of general geography and special geography, the latter being subdivided under headings dealing with different countries. In the various subdivisions the works dealt with are classified under the names of the authors, and include publications in several languages.

In an article in the *Cairo Scientific Journal* for March Captain H. G. Lyons, F.R.S., deals with "Some Unsolved Problems of the Nile Basin." Exploration in this region by geographical pioneers has extended our knowledge of its main features, but detailed surveying is needed, especially on the northern margin of the equatorial plateau and of the Abyssinian tableland. In the field of geology Captain Lyons gives a sketch of the history of the Nile Valley, and comments on the secular rise of the lower valley and its future effects on Middle Egypt. Observations are required of the underground water table, its seasonal movement, and level with reference to the river. No definite information can be obtained of the coal or other minerals of commercial value until the early geological history of north-east Africa is better known. The great meteorological problem to be solved is that of the monsoon rains of Abyssinia and the Sudan. The development of rains in equatorial regions, snowfall on the Himalayas, and high-pressure conditions in North Africa are some of the influences to be studied as possibly affecting the Abyssinian rains. Historically, the question of the change of climate in North Africa is of great interest, although other causes should be considered simultaneously in accounting for the decay of the flourishing settlements which once existed in this region. Referring to the oases of North Africa, Captain Lyons reviews briefly the evidence of underground water in the desert, and states the problems of its supply and connection with the Nile.

A good illustration of the power of the weapon which the discovery of the Röntgen rays has placed in the hands of the medical profession is afforded by an article entitled "A Study of Constipation by Means of the X-rays," by Dr. A. F. Hertz, of Guy's Hospital, which appears in the June number of the *Archives of the Röntgen Ray*. After a dose of a bismuth salt has been administered to a patient it is possible to follow by Röntgen-ray photography the passage of the food through the œsophagus, stomach, and intestines, and thus determine the position, and in some cases the nature, of any obstruction which may be present.

The *Physikalische Zeitschrift* for June 15 contains a translation of a paper by Mr. O. M. Corbino, of the University of Messina, on an arrangement for producing almost constant direct currents of high potential. It consists of an induction coil capable of giving a spark of a few centimetres the primary current of which is supplied through a Wehnelt interruptor having a very small anode. The secondary is connected to the terminals of a condenser of a few micro-farads capacity which has a resistance of about 20,000 ohms in parallel with it. Between one terminal of the coil and the corresponding terminal of the condenser a spark gap of 2 mm. is inserted. In these circumstances a direct current of about 30 milliamperes flows through the 20,000 ohms, and its magnitude seems to be little influenced by change of value of the resistance.

We have received a copy of a new quarterly journal published by the Institution of the Post Office Electrical Engineers, and entitled the *Post Office Electrical Engineers' Journal*. The new journal is chiefly devoted to technical matters of interest to Post Office engineers, the articles in the first number dealing with various telegraphic and telephonic subjects. Doubtless sufficient scope exists for such a paper amongst the large staff engaged at home and in the colonies, and if future numbers fulfil the promise of the first, it should go a long way to promote the spirit of fellowship and feeling of common interest which is one of the main reasons for its inception. It is to be hoped the editors will not be led to step outside the legitimate limits of such a more or less private journal by attempting to make it the receptacle for much original research, and thus adding one more to the already excessive number of journals which the electrical engineer must consult. The lighter and social sides also find adequate treatment in the present number, the contributions being in both prose and verse. We wish the new publication all success.

A well-known experiment in physics is to freeze water by placing under the receiver of an air-pump some water in a shallow dish supported above a large dish containing sulphuric acid. Upon exhausting the receiver, evaporation rapidly takes place and the vapour is absorbed by the acid, with the result that the temperature of the water may be reduced to freezing point. We have recently had an opportunity of seeing the Raplin Hand Ice Machine, made by the Pulsometer Engineering Co., in which this principle is put to commercial use. The apparatus consists of a large bottle containing the sulphuric acid, and connected with the air-pump and a carafe or an ice-mould by means of pipes. A wheel turned by hand serves to actuate the pump, which reduces the pressure and also rocks the acid-container, so that the acid is splashed thoroughly and the absorption of the vapour by it is thus facilitated. In three or four minutes a carafe of ice-cold water can be produced, and a block of ice weighing about 1 lb. in twenty minutes. Half a gallon of acid constitutes a complete charge, and will serve to cool from fifty to one hundred carafes of water to freezing. The machine provides an interesting and handy means of reducing temperature by rapid evaporation.

The Select Committee of the House of Commons on the question of proposed daylight saving legislation has now completed its inquiry, and agreed upon its report. The report is understood to be favourable to the principle of the Bill introduced earlier in the session on the subject by Mr. Robert Pearce. The committee is in favour of the introduction of a Bill to achieve the object in view by an alteration of clocks to the extent of one hour at 2 a.m. on the third Sunday in April and by an hour's alteration in the opposite direction on the morning of the third Sunday in September.

A very useful classified list of Smithsonian publications available for distribution has been published by the Smithsonian Institution of Washington. The volumes and pamphlets are arranged conveniently according to subjects. Applicants for these publications must state the ground of their requests, as the institution is able to supply papers only as an aid to the research or study in which the applicant is especially interested. The volumes of contributions and of miscellaneous collections are distributed only to public libraries and to learned societies. Unfortunately, we have no agency in this country which is in a position to aid the spread of scientific knowledge in a similar way and on the same generous scale as the Smithsonian Institution.